

FIRE INVESTIGATOR ONE



PRACTICAL SKILL SHEETS

INDIANA HOMELAND SECURITY TRAINING INSTITUTE

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NFPA OBJECTIVE	TEST QUESTION #	SKILL SHEET #
4.1 General		
4.1.1 The fire investigator shall meet the job performance requirements defined in Sections 4.2 through 4.7.		
4.1.2 The fire investigator shall meet the requirements of 4.2.1 through 4.2.3 of <u>NFPA 472</u>		
4.1.3 The fire investigator shall employ all elements of the scientific method as the operating analytical process throughout the investigation and for the drawing of conclusions.		
4.1.4 Because fire investigators are required to perform activities in adverse conditions, site safety assessments shall be completed on all scenes and regional and national safety standards shall be followed and included in organizational policies and procedures.	2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21	
4.1.5 The fire investigator shall maintain necessary liaison with other interested professionals and entities.	9,10,16,17,22,23,24	
4.1.6 The fire investigator shall adhere to all applicable legal and regulatory requirements.	22,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42	
4.1.7 The fire investigator shall understand the organization and operation of the investigative team within an incident management system.	9,43	

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<p>4.2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and act or activity that brought ignition source and materials together and to assess the subsequent progression, extinguishment, and containment of the fire.</p>		<p>JPR #'s 1,2,3,4,5,6,7,8,9,10, 11</p>
<p>4.2.1 Secure the fire ground, given marking devices, sufficient personnel, and special tools and equipment, so that unauthorized persons can recognize the perimeters of the investigative scene and are kept from restricted areas and all evidence or potential evidence is protected from damage or destruction.</p>	<p>19,44,45,46,47,48,49,50,51 52,53,56</p>	<p>JPR #1</p>
<p>(A) Requisite Knowledge. Fire ground hazards, types of evidence, and the importance of fire scene security, evidence preservation, and issues relating to spoliation.</p>	<p>19,44,45,46,47,48,19,50,51 52,53,56</p>	
<p>(B) Requisite Skills. Use of marking devices.</p>	<p>44,45,46</p>	<p>JPR #1</p>
<p>4.2.2 Conduct an exterior survey, given standard equipment and tools, so that evidence is preserved, fire damage is interpreted, hazards are identified to avoid injuries, accessibility to the property is determined, and all potential means of ingress and egress are discovered.</p>	<p>5,11,13,14,15,16,17,18,19, 20,21,49,50,51,52,54,55,56 57,58,83,84,85,86,87,88,89 ,90,91,92,93,95,96,97,98,9 9,100,101,102,103,104,105 ,106,107,108,109,110,111, 112,113,114,115,116,117, 118,119,120,121,122,123, 124,125,126,127,128,129, 130,131,132,133,134,136</p>	<p>JPR #2</p>

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(A) Requisite Knowledge. The types of building construction and the effects of fire upon construction materials, types of evidence commonly found in the perimeter, evidence preservation methods, the effects of fire suppression, fire behavior and spread, and burn patterns.	5,6,11,12,13,14,15,16,17, 18,19,20,21,49,50,51,52,54 55,56,57,58,59,60,61,62,63 64,65,66,67,68,69,70,71,72 73,74,75,76,77,78,79,80,81 82,83,84,85,86,87,88,89,90 91,92,93,94,95,96,97,98,99 100,101,102,103,104,105, 106,107,108,109,110,111, 112,113,114,115,116,117, 118,119,120,121,122,123, 124,125,126,127,128,129, 130,131,132,133,134,136, 147	
(B) Requisite Skills. Assess fire ground and structural condition, observe the damage and effects of the fire, and interpret burn patterns.	5,6,11,12,13,14,15,16,17, 18,19,20,21,55,57,58,83,84 85,89,90,91,92,93,95,96,97 98,99,100,101,130,131,132 134,136	JPR #2
4.2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved, the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.	49,50,51,52,54,55,58,83,84 85,86,87,88,89,90,91,92,93 95,96,97,98,99,100,101, 102,103,104,105,106,107, 108,109,110,111,112,113, 114,115,116,117,118,119 120,121,122,123,124,125, 126,127,128,129,131,132, 133,134,135,136,137,138, 139,140,141,142,143,145, 146,148,149,150,151,152, 153	JPR #'s 1,2,3,4,5,6,7,8,9,10, 11,12

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<p>(A) Requisite Knowledge. The types of building construction and interior finish and the effects of fire upon those materials, the effects of fire suppression, fire behavior and spread, evidence preservation methods, burn patterns, effects of building contents on fire growth, and the relationship of building contents to the overall investigation.</p>	<p>49,50,51,52,54,55,58,59,60 61,62,63,64,65,66,67,68,69 70,71,72,73,74,75,76,77,78 79,80,81,82,83,84,85,86,87 88,89,90,91,92,93,94,95,96 97,98,99,100,101,102,103, 104,105,106,107,108,109, 110,111,112,113,114,115, 116,117,118,119,120,121, 122,123,124,125,126,127, 128,129,131,132,133,134, 135,136,137,138,139,140, 141,142,143,144,145,146, 147,148,149,150,151,152, 153</p>	
<p>(B) Requisite Skills. Assess structural conditions, observe the damage and effects of the fire, discover the impact of fire suppression efforts on fire flow and heat propagation, and evaluate protected areas to determine the presence and/or absence of contents.</p>		<p>JPR #'s 1,2,3,4,5,6,7,8,9,10, 11,12</p>
<p>4.2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.</p>	<p>54,55,58,59,60,61,62,65,67 69,78,79,80,84,88,89,90,91 ,92,100,101,130,131,132, 133,134,137,138,139,140, 141,142,143,144,145,146, 148,149,151,152,153,154, 155,156,157,158,159,160, 161,162,163,164,165,166, 167,168,169,170,171,172, 173,174,175</p>	<p>JPR #'s 2,3,5,6,7,8,9,10,11, 12</p>

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(A) Requisite Knowledge. Fire development and the interrelationship of heat release rate, form, and ignitability of materials.	54,58,59,60,61,62,65,67,69 78,79,80,84,88,89,90,91,92 100,101,130,131,132,133, 134,137,138,139,140,141, 142,143,144,145,146,148, 149,151,152,153,154,155, 156,157,158,159,160,161, 162,163,164,165,166,167, 168,169,170,171,172,173, 174,175	
(B) Requisite Skills. Interpret the effects of burning characteristics on different types of materials.	55,58,59,60,61,62,65,67,6, 78,79,80,84,88,89,90,91,92 100,101,130,131,132,133, 134,137,138,139,140,141, 142,143,145,146,148,149, 151,152,153,154,155,156, 157,158,159,160,161,162, 163,164,165,166,167,168, 169,173,174,175	JPR #'s 2,3,5,6,7,8,9,10,11, 12
4.2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.	54,55,58,59,60,61,62,63,64 65,67,70,72,73,74,75,76,77 78,79,80,81,84,87,88,89,90 91,92,101,102,103,104,106 107,108,109,110,111,112, 113,114,115,116,117,118, 119,120,121,122,123,124, 125,126,127,128,129,130, 131,132,134,137,138,139, 140,141,142,143,144,145, 146,148,149,151,152,153, 154,155,156,158,159,160, 161,162,163,164,165,166, 167,168,169,170,171,172, 173,174,175,176,177	JPR #'s 1,2,3,4,5,6,7,8,9,10, 11,12

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<p>(A) Requisite Knowledge. Fire behavior and spread based on fire chemistry and physics, fire suppression effects, and building construction.</p>	<p>54,55,58,59,60,61,62,63,64 65,67,70,71,72,73,74,75,76 77,78,79,80,81,84,87,88,89 90,91,92,94,101,102,103 104,106,107,108,109,110, 111,112,113,114,115,116, 117,118,119,120,121,122, 123,124,125,126,127,128, 129,130,131,132,134,137, 138,139,140,141,142,143, 144,145,146,148,149,151, 152,153,154,155,156,158, 159,160,161,162,163,164, 165,166,167,168,169,170, 171,172,173,174,175,176, 177</p>	
<p>(B) Requisite Skills. Interpret variations of burn patterns on different materials with consideration given to heat release rate, form, and ignitability; distinguish impact of different types of fuel loads; evaluate fuel trails; and analyze and synthesize information.</p>	<p>55,58,59,60,61,62,63,64,65 67,70,71,72,73,74,75,76,77 78,79,80,81,84,87,88,130, 132,134,137,138,139,140, 141,142,143,144,145,146, 148,149,151,152,153,154, 155,156,158,159,160,161, 162,163,164,165,166,167, 168,169,173,174,175,176, 177</p>	<p>JPR #'s 1,2,3,4,5,6,7,8,9,10, 11,12</p>
<p>4.2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, potential ignition source(s) is identified, and evidence is preserved without investigator-inflicted damage or contamination.</p>	<p>54,56,66,68,73,74,130,132, 134,135,136,137,149,151, 152,162,166,167,168,169, 170,171,172,175,176,178, 179,180,181,182,183,184</p>	<p>JPR #'s 1,2,3,4,5,6,7,8,9,10, 11,12</p>

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(A) Requisite Knowledge. Basic understanding of ignition processes, characteristics of ignition sources, and ease of ignition of fuels; debris-layering techniques; use of tools and equipment during the debris search; types of fire cause evidence commonly found in various degrees of damage; and evidence-gathering methods and documentation.	54,56,66,68,73,74,130,132,134,135,136,149,151,152,162,166,167,168,169,170,171,172,175,176,178,179,180,181,182,183,184	
(B) Requisite Skills. Employ search techniques that further the discovery of fire cause evidence and ignition sources, use search techniques that incorporate documentation, and collect and preserve evidence.	56,66,68,73,74,130,132,134,135,136,137,149,151,152,162,166,167,168,169,170,171,172,175,176,178,179,180,181,182,183,184	JPR #'s 1,2,3,4,5,6,7,8,9,10, 11,12
4.2.7 Reconstruct the area of origin, given standard and, if needed, special equipment and tools as well as sufficient personnel, so that all protected areas and burn patterns are identified and correlated to contents or structural remains, items potentially critical to cause determination and photo documentation are returned to their pre-fire location, and the area(s) or point(s) of origin is discovered.	58,82,101,130,132,134,136,137,138,139,140,141,147,149,151,152,162,171,172,176,180,181,182,183,184,185,186,187,188,189,190	JPR #10
(A) Requisite Knowledge. The effects of fire on different types of material and the importance and uses of reconstruction.	58,82,10,130,132,134,136,138,139,140,141,147,149,151,152,162,171,172,176,180,181,182,183,184,185,186,187,188,189,190	
(B) Requisite Skills. Examine all materials to determine the effects of fire, identify and distinguish among different types of fire-damaged contents, and return materials to their original position using protected areas and burn patterns	58,82,130,132,134,136,137,138,139,140,141,147,149,151,152,162,171,172,176,180,181,182,183,184,185,186,187,188,189,190	JPR #10

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4.2.8* Inspect the performance of building systems, including detection, suppression, HVAC, utilities, and building compartmentation, given standard and special equipment and tools, so that a determination can be made as to the need for expert resources, an operating system's impact on fire growth and spread is considered in identifying origin areas, defeated and/or failed systems are identified, and the system's potential as a fire cause is recognized	179,187,188,191,192,193,194,195,196,197,198,199,200,201,202,203	JPR #12
(A) Requisite Knowledge. Different types of detection, suppression, HVAC, utility, and building compartmentation such as fire walls and fire doors; types of expert resources for building systems; the impact of fire on various systems; common methods used to defeat a system's functional capability; and types of failures.	179,187,188,191,192,193,194,195,196,197,198,199,200,201,202,203	
(B) Requisite Skills. Determine the system's operation and its effect on the fire; identify alterations to, and failure indicators of, building systems; and evaluate the impact of suppression efforts on building systems.	179,187,188,191,192,193,194,195,196,197,198,199,200,201,202,203	JPR #12
4.2.9 Discriminate the effects of explosions from other types of damage, given standard equipment and tools, so that an explosion is identified and its evidence is preserved.	73,166,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221	JPR #12
(A) Requisite Knowledge. Different types of explosions and their causes, characteristics of an explosion, and the difference between low- and high-order explosions.	73,166,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,200,221	

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(B) Requisite Skills. Identify explosive effects on glass, walls, foundations, and other building materials; distinguish between low- and high-order explosion effects; and analyze damage to document the blast zone and origin.	73,166,204,205,206,207,208,209,210,211,212,213	JPR #12
4.3 Documenting the Scene. Duties shall include diagramming the scene, photographing, and taking field notes to be used to compile a final report.		JPR #'s 1,2,3
4.3.1 Diagram the scene, given standard tools and equipment, so that the scene is accurately represented and evidence, pertinent contents, significant patterns, and area(s) or point(s) of origin are identified.	222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,265	JPR #1
(A) Requisite Knowledge. Commonly used symbols and legends that clarify the diagram, types of evidence and patterns that need to be documented, and formats for diagramming the scene.	222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,265	
(B) Requisite Skills. Ability to sketch the scene, basic drafting skills, and evidence recognition and observational skills.	222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,265	JPR #'s 1,2,3
4.3.2 Photographically document the scene, given standard tools and equipment, so that the scene is accurately depicted and the photographs support scene findings.	135,136,238,241,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265	JPR #2
(A) Requisite Knowledge. Working knowledge of high-resolution camera and flash, the types of film, media, and flash available, and the strengths and limitations of each.	135,136,238,241,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265	

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(B) Requisite Skills. Ability to use a high-resolution camera, flash, and accessories.	135,136,238,241,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265	JPR #2
4.3.3 Construct investigative notes, given a fire scene, available documents (<i>e.g., prefire plans and inspection reports</i>), and interview information, so that the notes are accurate, provide further documentation of the scene, and represent complete documentation of the scene findings.	229,230,231,232,238,241,242,243,247,248,252,253,254,255,256,257,258,259,260,261,262,263,265,266,267,268	JPR #3
(A) Requisite Knowledge. Relationship between notes, diagrams, and photos, how to reduce scene information into concise notes, and the use of notes during report writing and legal proceedings.	229,230,231,232,238,241,242,243,247,248,252,253,254,255,256,257,258,259,260,261,262,263,265,266,267,268	
(B) Requisite Skills. Data-reduction skills, note-taking skills, and observational and correlating skills.	229,230,231,232,238,241,242,243,247,248,252,253,254,255,256,257,258,259,260,261,262,263,265,266,267,268	JPR #3
4.4 Evidence Collection/Preservation. Duties shall include using proper physical and legal procedures to retain evidence required within the investigation.		JPR #'s 4,11
4.4.1 Utilize proper procedures for managing victims and fatalities, given a protocol and appropriate personnel, so that all evidence is discovered and preserved and the protocol procedures are followed.	178,26,270,271,272,273,274,275,276,277,278,279,280,281,282,283	JPR #11

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(A) Requisite Knowledge. Types of evidence associated with fire victims and fatalities and evidence preservation methods.	178,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283	
(B) Requisite Skills. Observational skills and the ability to apply protocols to given situations.	178,269,270,271,272,273,274,275,276,278,279,280,281,282,283	JPR #'s 4,11
4.4.2 Locate, collect, and package evidence, given standard or special tools and equipment and evidence collection materials, so that evidence is identified, preserved, collected, and packaged to avoid contamination and investigator-inflicted damage and the chain of custody is established.	32,33,34,36,46,150,178,270,271,272,274,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309	JPR #4
(A) Requisite Knowledge. Types of evidence, authority requirements, impact of removing evidentiary items on civil or criminal proceedings (<i>exclusionary or fire-cause supportive evidence</i>), types, capabilities, and limitations of standard and special tools used to locate evidence, types of laboratory tests available, packaging techniques and materials, and impact of evidence collection on the investigation.	32,33,34,36,46,150,178,270,271,272,274,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309	
(B) Requisite Skills. Ability to recognize different types of evidence and determine whether evidence is critical to the investigation.	32,33,34,36,46,150,178,270,271,272,274,284,285,286,287,288,289,290,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309	JPR #4
4.4.3 Select evidence for analysis given all information from the investigation, so that items for analysis support specific investigation needs.	178,270,271,272,285,286,288,289,294,302,303,304,305,306,307,308,309,310,311	JPR #4

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(A) Requisite Knowledge. Purposes for submitting items for analysis, types of analytical services available, and capabilities and limitations of the services performing the analysis.	178,270,271,272,285,286,288,289,294,303,304,305,306,307,308,309,310,311	
(B) Requisite Skills. Evaluate the fire incident to determine forensic, engineering, or laboratory needs.	178,270,271,272,285,286,288,289,294,303,304,305,306,307,308,309,310,311	JPR #4
4.4.4 Maintain a chain of custody, given standard investigative tools, marking tools, and evidence tags or logs, so that written documentation exists for each piece of evidence and evidence is secured.	32,33,34,36,46,238,244,270,312,313,314,315,316,317	JPR #4
(A) Requisite Knowledge. Rules of custody and transfer procedures, types of evidence (e.g., physical evidence obtained at the scene, photos, and documents), and methods of recording the chain of custody.	32,33,34,36,46,238,244,270,312,313,314,315,316,317	
(B) Requisite Skills. Ability to execute the chain of custody procedures and accurately complete necessary documents.	32,33,34,36,46,238,244,270,312,313,314,315,316,317	JPR #4
4.4.5 Dispose of evidence, given jurisdictional or agency regulations and file information, so that the disposal is timely, safely conducted, and in compliance with jurisdictional or agency requirements.	318,319,320	JPR #11
(A) Requisite Knowledge. Disposal services available and common disposal procedures and problems.	318,319,320	
(B) Requisite Skills. Documentation skills.	318,319,320	JPR #11

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4.5 Interview. Duties shall include obtaining information regarding the overall fire investigation from others through verbal communication.		JPR #'s 5,6
4.5.1 Develop an interview plan, given no special tools or equipment, so that the plan reflects a strategy to further determine the fire cause and affix responsibility and includes a relevant questioning strategy for each individual to be interviewed that promotes the efficient use of the investigator's time.	321,323,324,321,325,326, 327,328,329,330,331,332, 333,334,335,336,337	JPR #5
(A) Requisite Knowledge. Persons who can provide information that furthers the fire cause determination or the affixing of responsibility, types of questions that are pertinent and efficient to ask of different information sources (<i>first responders, neighbors, witnesses, suspects, and so forth</i>), and pros and cons of interviews versus document gathering	321,323,324,321,325,326, 327,328,329,330,331,332, 333,334,335,336,337	
(B) Requisite Skills. Planning skills, development of focused questions for specific individuals, and evaluation of existing file data to help develop questions and fill investigative gaps.	321,323,322,324,325,326 327,328,329,330,331,332, 333,334,335,336,337	JPR #'s 5,6
4.5.2 Conduct interviews, given incident information, so that pertinent information is obtained, follow-up questions are asked, responses to all questions are elicited, and the response to each question is documented accurately.	321,325,326,327,328,330, 332,334,335,336,338,339, 340,341,342,343,344	JPR #6

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(A) Requisite Knowledge. Types of interviews, personal information needed for proper documentation or follow-up, documenting methods and tools, and types of nonverbal communications and their meaning.	321,325,326,327,328,330,332,334,335,336,338,339,340,341,342,343,344	
(B) Requisite Skills. Adjust interviewing strategies based on deductive reasoning, interpret verbal and nonverbal communications, apply legal requirements applicable, and exhibit strong listening skills.	321,325,326,327,328,332,334,335,336,338,339,340,341,342,343,344	JPR #6
4.5.3 Evaluate interview information, given interview transcripts or notes and incident data, so that all interview data is individually analyzed and correlated with all other interviews, corroborative and conflictive information is documented, and new leads are developed.	325,326,327,332,334,335,336,345,346,347,348,349	JPR #6
(A) Requisite Knowledge. Types of interviews, report evaluation methods, and data correlation methods.	325,326,327,332,334,335,345,346,347,348,349	
(B) Requisite Skills. Data correlation skills and the ability to evaluate source information (<i>e.g.</i> , first responders and other <i>witnesses</i>).	325,326,327,332,334,335,336,345,346,347,348,349	JPR #6
4.6 Post-Incident Investigation. Duties shall include the investigation of all factors beyond the fire scene at the time of the origin and cause determination.		JPR #'s 7,8,9

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4.6.1 Gather reports and records, given no special tools, equipment, or materials, so that all gathered documents are applicable to the investigation, complete, and authentic; the chain of custody is maintained; and the material is admissible in a legal proceeding	24,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366	JPR #7
(A) Requisite Knowledge. Types of reports needed that facilitate determining responsibility for the fire (<i>e.g., police reports, fire reports, insurance policies, financial records, deeds, private investigator reports, outside photos, and videos</i>) and location of these reports.	24,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366	
(B) Requisite Skills. Identify the reports and documents necessary for the investigation, implement the chain of custody, and organizational skills.	34,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366	JPR #'s 7,8,9
4.6.2 Evaluate the investigative file, given all available file information, so that areas for further investigation are identified, the relationship between gathered documents and information is interpreted, and corroborative evidence and information discrepancies are discovered.	351,352,353,354,355,356,357,358,359,367,368,369,370,371,372	JPR #8
(A) Requisite Knowledge. File assessment and/or evaluation methods, including accurate documentation practices, and requisite investigative elements.	351,352,353,354,355,356,357,358,359,367,368,369,370,371,372	

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(B) Requisite Skills. Information assessment, correlation, and organizational skills.	351,352,353,354,355,356, 357,358,359,367,368,369, 370,371,372	JPR #8
4.6.3 Coordinate expert resources, given the investigative file, reports, and documents, so that the expert's competencies are matched to the specific investigation needs, financial expenditures are justified, and utilization clearly furthers the investigative goals of determining cause or affixing responsibility.	26,27,28,373,374,375,376, 377,378,379,380	JPR #9
(A) Requisite Knowledge. How to assess one's own expertise, qualification to be called for expert testimony, types of expert resources (<i>e.g., forensic, CPA, polygraph, financial, human behavior disorders, and engineering</i>), and methods to identify expert resources.	26,27,28,373,374,375,376, 377,378,379,380	
(B) Requisite Skills. Apply expert resources to further the investigation by networking with other investigators to identify experts, questioning experts relative to their qualifications, and developing a utilization plan for use of expert resources.	26,27,28,373,374,375,376, 377,378,379,380	JPR #9
4.6.4 Establish evidence as to motive and/or opportunity, given an incendiary fire, so that the evidence is supported by documentation and meets the evidentiary requirements of the jurisdiction.	355,356,357,358,381,382 383,384,385,386,387,388, 389,390,391,392	JPR #9

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(A) Requisite Knowledge. Types of motives common to incendiary fires, methods used to discover opportunity, and human behavioral patterns relative to fire-setting.	355,356,357,358,381,382, 383,384,385,386,387,388, 389,390,391,392	
(B) Requisite Skills. Financial analysis, records gathering and analysis, interviewing, and interpreting fire scene information and evidence for relationship to motive and/or opportunity.	355,356,357,358,384,382, 383,384,385,386,387,388, 390,391,389,392	JPR #9
4.6.5 Formulate an opinion of the person(s) and/or product(s) responsible for the fire, given all investigative findings, so that the opinion regarding responsibility for a fire is supported by the records, reports, documents, and evidence.	38,39,40,41,42,355,356 357,358,367,369,370,371, 372,373,374,375,376,377, 382,384,385,386,387,388, 390,391,389,393,394,395, 396,397,398	JPR #9
(A) Requisite Knowledge. Analytical methods and procedures (e.g., <i>hypothesis development and testing, systems analysis, time lines, link analysis, fault tree analysis, and data reduction matrixing</i>).	38,39,40,41,42,142,355, 356,357,358,367,369,370 371,372,373,374,375,376 377,382,384,385,386,387, 388,390,389,391,393,394, 395,396,397,399	
(B) Requisite Skills. Analytical and assimilation skills	38,39,40,41,42,355,356, 357,358,367,369,370,371, 372,373,374,375,376,377, 382,384,385,,386,387,388, 389,390,391,393,394,395, 396,397,399	JPR #9
4.7 Presentations Duties shall include the presentation of findings to those individuals not involved in the actual investigations.	401	JPR #'s 1,2,4,5,6,7,8,9,10,11, 12

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4.7.1 Prepare a written investigation report, given investigative findings, documentation, and a specific audience, so that the report accurately reflects the investigative findings, is concise, expresses the investigator's opinion, and meets the needs or requirements of the intended audience(s).	400,401,402,403,404,405, 406,407,408,409,410,411, 412	
(A) Requisite Knowledge. Elements of writing, typical components of a written report, and types of audiences and their respective needs or requirements.	400,401,402,403,404,405, 406,407,408,409,410,411, 412	
(B) Requisite Skills. Writing skills, ability to analyze information and determine the reader's needs or requirements.	400,401,402,403,404,405, 406,407,408,409,410,411, 412	
4.7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.	29,30,31,407,409,413	JPR #'s 1,2,3,4,5,6,7,8,9,10, 11
(A) Requisite Knowledge. Types of investigative findings, the informational needs of various types of audiences, and the impact of releasing information.	29,30,31,407,409,413	

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(B) Requisite Skills. Communication skills and ability to determine audience needs and correlate findings.	29,30,31,407,409,413	JPR #'s 1,2,3,4,5,6,7,8,9,10, 11
4.7.3 Testify during legal proceedings, given investigative findings, contents of reports, and consultation with legal counsel, so that all pertinent investigative information and evidence is presented clearly and accurately and the investigator's demeanor and attire are appropriate to the proceedings.	29,30,31,249,407,409,413, 414,415,416,417,418,419, 420,421,422,423,424,425, 426,427,428	JPR #11
(A) Requisite Knowledge. Types of investigative findings, types of legal proceedings, professional demeanor requirements, and an understanding of due process and legal proceedings.	29,30,31,249,407,409,413, 414,415,416,417,418,419, 420,421,422,423,424,425, 426,427,428	
(B) Requisite Skills. Communication and listening skills and ability to differentiate facts from opinion and determine accepted procedures, practices, and etiquette during legal proceedings.	29,30,31,249,407,409,413, 414,415,416,417,418,419, 420,421,422,423,424,426, 428	JPR #11
4.7.4 Conduct public informational presentations, given relative data, so that information is accurate, appropriate to the audience, and clearly supports the information needs of the audience.	403,413,429,430	JPR #12
(A) Requisite Knowledge. Types of data available regarding the fire loss problem and the issues about which the community must know.	403,413,429,430	

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(B) Requisite Skills. Ability to assemble, organize, and present information.	403,413,429,430	JPR #12
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Fire Investigator One

STATE OF INDIANA JOB PERFORMANCE REQUIREMENT SKILLS EVALUATION SYSTEM

CANDIDATE: _____

EVALUATOR: _____

DATE: _____ **COURSE NUMBER:** _____

LOCATION: _____

OBJECTIVE:

The Job Performance Requirement Skills Evaluation System is divided into Skill Stations based upon the subject headings within the certification standard. Each of the skill stations are further broken down into Skills Tests which are drawn from each component of the standard. This is an “Evaluation and not a “Training Session”. The candidate must satisfactorily pass each skill.

INSTRUCTORS AND EVALUATORS:

Each Skill Test presented within this Skill Packet is based upon Job Performance Requirements identified by The National Fire Protection Agency and approved by the Indiana Board of Firefighting Personnel Standards and Education. Instructor II/III whom, is serving as the Lead Instructor and/or Lead Evaluator are mandated to ensure the Evaluation and Testing Results satisfy the Job Performance Requirement as described by the standard.

CANDIDATES:

If the candidate is unable to perform a task, the Evaluator will identify the specific task as a “Recommended Area for Further Training.” Each Candidate shall advise the Evaluator when they have completed each Skill Station. Candidates will not find out the results of an individual Skill Station until all evaluations scheduled for that day have been completed. Candidates have the option to retake any Skill Test at the end of the Evaluation Session or during a make-up session.

Fire Investigator One

Fire Investigator I Practical skills 1

At 1800 hours you arrive at the scene of a 1 story ranch style residence, as you approach the residence you notice dark stains on the outside of the building around all the window openings on the east side of the structure. The windows were broken out, glass lying outside on the ground. You enter the structure through the front door and observe heavy smoke stains on the ceiling and walls. You enter into the kitchen and observe heavy smoke and charring behind and above the electric range. Through further observation of the range you notice the handle for the burners were in the on position and a pan with a liquid substance sitting on top.

Practical Skills Evaluation

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4.2.1 Secure the fire ground, given marking devices, sufficient personnel, and special tools and equipment, so that unauthorized persons can recognize the perimeters of the investigative scene and are kept from restricted areas, and all evidence or potential evidence is from damage or destruction.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-3 Documenting the Scene. Duties shall include diagramming the scene, photographing, and taking field notes to be used to compile a final report.

4-3.1 Diagram the scene, given standard tools and equipment, so that the scene is accurately represented and evidence, pertinent contents, significant patterns, and origin areas or points are identified.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Demonstrates/describes methods to secure the fire ground to keep unauthorized persons from restricted areas and evidence is protected. (4-2.1)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Prepares a diagram so the scene is accurately represented and evidence, significant patterns and origin areas are identified. (4-3.1)

Expresses investigative findings verbally so that the information is accurate. (4-7.2)

Pass Fail

Pass ☐ Fail ☐

Evaluator: _____ Date: _____

Fire Investigator One

Practical skills 2

Using the information in practical skills 1

You perform a complete walk around of the exterior of the structure you observe heavy smoke stains on the north and west sides. During this process you photograph all sides of the exterior and explain a systematic approach to the interior photographs.

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4-2.2 Conduct an exterior survey, given standard equipment and tools; so that evidence is reserved, fire damage is interpreted, hazards are identified to avoid injuries, accessibility to the property is determined, and all potential means of ingress and egress are discovered.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-3 Documenting the Scene. Duties shall include diagramming the scene, photographing, and taking field notes to be used to compile a final report.

4-3.2* Photographically document the scene, given standard tools and equipment, so that the scene is accurately depicted and the photographs appropriately support scene findings.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Conducts an exterior survey of the scene so that evidence is preserved, hazards are identified, and preserved. (4-2.2)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Photographs the scene with equipment provided so the scene is accurately depicted and the photographs support scene findings and a photo log is accurately prepared. (4-3.2)

Expresses investigative findings verbally so that the information is accurate. (4-7.2)

Pass Fail

Pass ☐ Fail ☐

Evaluator: _____ Date: _____

Fire Investigator One

Practical skills 3

Using Practical skills 1

As you interview the occupants of the residence, the occupant states they were cooking at approximately 1630 hours when they left for the store, they advised they thought the range was turned off. The fire department was notified at 1745 hours with a 6 minute response time.

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-3 Documenting the Scene. Duties shall include diagramming the scene, photographing, and taking field notes to be used to compile a final report.

4-3.3 Construct investigative notes, give a fire scene, available documents (*e.g., prefire plans and inspection reports*), and interview information, so that the notes are accurate, provide further documentation of the scene, and represent complete documentation of the scene findings.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Pass Fail

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Constructs investigative notes with provided materials, so that notes are accurate, provide further documentation of the scene, and represent complete documentation of scene findings. (4-3.3)

Expresses investigative findings verbally so that the information is accurate. (4-7.2)

Pass

☐

Fail

☐

Evaluator: _____ Date: _____

Fire Investigator One

Practical skills 4

At 0200 hours you arrive at the scene of a vehicle fire in a vacant lot, after talking with the initial responders, they advise they found a one gallon gas can located three feet from the engine compartment and the remains of newspaper in the back seat. Using your protocols identify, preserve and collect the evidence from this scene.

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-4 Evidence Collection/Preservation. Duties shall include using proper physical and legal procedures to retain evidence required within the investigation.

4-4.2 Locate, collect, and package evidence, given standard or special tools and equipment and evidence collection materials, so that evidence is identified, preserved, collected, and packaged to avoid contamination and investigator-inflicted damage, and the chain of custody is established.

4-4.3 Select appropriate evidence for analysis, given information from the investigative file, so that samples forwarded for analysis support specific investigative needs.

4-4.4 Maintain a chain of custody, given standard investigative tools, marking tools, and evidence tags or logs, so that written documentation exists for each piece of evidence and evidence is secured.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Selects appropriate evidence for analysis so that samples support specific investigative needs (4-4.2 & 4-4.3)

Collects and packages evidence and establishes the chain of custody for evidence through completion of appropriate analysis request and custody receipt forms. (4-4.4)

Expresses investigative findings verbally so that the information is accurate. (4-7.2)

Pass Fail

Pass ☐ Fail ☐

Evaluator: _____ Date: _____

Fire Investigator One

Practical skill 5

Using practical skills 4

You find the owner of the vehicle; provide a list of question for the owner pertaining to the gas can and newspapers.

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-5 Interview/Interrogation. Duties shall include obtaining information regarding the overall fire investigation from others through verbal communication.

4-5.1 Develop an interview plan, given no special tools or equipment, so that the plan reflects a strategy to further determine the fire cause and affix responsibility, and includes a relevant questioning strategy for each individual to be interviewed that promotes the efficient use of the investigator's time.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Develops an interview plan so that the plan reflects a strategy to further determine the fire cause and affix responsibility includes a relevant strategy for each individual to be interviewed. (4-5.1)

Expresses investigative findings verbally so that the information is accurate. (4-7.2)

Pass Fail

Pass

☐

Fail

☐

Evaluator: _____ Date: _____

Fire Investigator One

Practical skills 6

Using the information in practical skills 4 and 5

The vehicle owner stated the vehicle has been experiencing engine problems during the past few days. He stated he tried to use gasoline to get the vehicle started when it caught fire he had no means of notifying the fire department.

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-5 Interview/Interrogation. Duties shall include obtaining information regarding the overall fire investigation from others through verbal communication.

4-5.2 Conduct interviews or interrogations, given incident information, so that pertinent information is obtained, follow-up questions are asked, responses to all questions are elicited, and the response to each question is documented accurately.

4-5.3 Evaluate interview information, given interview transcripts or notes and incident data, so that all interview data is individually analyzed and correlated with all other interview, corroborative and conflictive information is documented, and new leads are discovered.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Conducts interviews, given incident information, so that pertinent information is obtained, followed-up questions are asked and the responses are documented accurately. (4-5.2)

Evaluates interview information so that all interview data is analyzed and correlated with other interviews. (4-5.3)

Expresses investigative findings verbally so that the information is accurate. (4-7.2)

Pass Fail

Pass ☐ Fail ☐

Evaluator: _____ Date: _____

Fire Investigator One

Practical skills 7

You collected evidence from the vehicle fire (*gas can, paper*) the paper was evaluated and showed traces of gasoline. The documents you received from the lab were placed in a file along with all investigation documents. All materials will be time stamped and dated along with signatures of all personnel who handled the evidence.

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-6 Post-incident Investigation. Duties shall include the investigation of all factors beyond the fire scene at the time of the origin and cause determination.

4-6.1 Gather reports and records, given no special tools, equipment, or materials, so that all gathered documents are appropriate to the investigation, complete, and authentic, the chain of custody is maintained, and the material is acceptable to the courts.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Gathers reports and records so that all gathered documents are appropriate to the investigation, the chain of custody is maintained, and the material is acceptable to the courts. (4-6.1)

Expresses investigative findings verbally so that the information is accurate. (4-7.2)

Pass Fail

Pass ☐

Fail ☐

Evaluator: _____ Date: _____

Fire Investigator One

Practical skills 8

Use the information in practical skills 7

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-6 Post- Incident Investigation. Duties shall include the investigation of all factors beyond the fire scene at the time of the origin and cause determination.

4-6.2 Evaluate the investigative file, given all available file information, so that areas for further investigation are identified, the relationship between gathered documents and information is interpreted and corroborative evidence and information discrepancies are discovered.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Evaluates the investigative file so that areas of further investigation are identified and information discrepancies are discovered. (4-6.2)

Expresses investigative findings verbally so that the information is accurate. (4-7.2)

Pass Fail

Pass ☐

Fail ☐

Evaluator: _____ **Date:** _____

Fire Investigator One

Practical skills 9

Using the information in practical skills 4,5,6,7,8

Formulate an opinion of the persons, and products responsible for the fire.

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-6 Post-Incident Investigation. Duties shall include the investigation of all factors beyond the fire scene at the time of the origin and cause determination.

4-6.3 Coordinate expert resources, given the investigative file, reports, and documents, so that the expert's competencies are matched to the specific investigation needs, financial expenditures are justified, and utilization clearly furthers the investigation toward the goals of causation determination or affixing responsibility.

4-6.4 Establish evidence as to motive and/or opportunity, given an incendiary fire, so that the evidence is the result of a prudent and complete investigation, is supported by documentation, and meets the evidentiary requirements of the jurisdiction.

4-6.5 Formulated an opinion of the person(s) and/or product(s) responsible for the fire, given all investigative findings, so that the opinion regarding responsibility for a fire is supported by all records, reports, documents, and evidence.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is

Fire Investigator One

completed within the allotted time and the presentation include only need-to-know information for the intended audience.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Coordinates expert resources so that the expert's competencies are matched to the specific investigation needs. (4-6.3)

Establishes evidence of motive and/or opportunity so that the evidence is the result of a prudent and complete investigation. (4-6.4)

Formulates an opinion of the person(s) and/or product(s) responsible for the fire so the opinion is supported by all records, reports, documents and evidence. (4-6.5)

Expresses investigative findings verbally so that the information is accurate. (4-7.2)

Pass Fail

Pass ☐

Fail ☐

Evaluator: _____ Date: _____

Fire Investigator One

Practical Skills 10

You arrive at the scene of a bedroom fire; after all initial scene examinations are complete you notice all the furniture has been removed. You notice burn patterns and smoke damage around where the dresser and bed were located. Describe and document the procedure you will follow to reconstruct the bedroom.

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-2.7 Reconstruct the area of origin, given standard and if needed, special equipment and tools as well as sufficient personnel, so that all protected area and burn patterns are identified and correlated to contents or structural remains, items potentially critical to cause determination and photo documentation are returned to their prefire location, and point(s) of origin is discovered.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.1 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Reconstructs the area of origin so protected areas and burn patterns are identified and the area of origin is properly discovered. (4-2.7)

Properly prepares a written investigation report so the report accurately reflects the investigative findings, is concise, expresses the investigator's opinion and is appropriate for the intended audience. (4-7.1)

Pass Fail

Pass ☐

Fail ☐

Evaluator: _____ Date: _____

Fire Investigator One

Practical skills 11

Your investigation is complete and the evidence you were keeping (gas cans and paper with flammable residue) are no longer needed. Describe the proper procedure for the disposal of this material.

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-4 Evidence Collection/Preservation. Duties shall include using proper physical and legal procedures to retain evidence required within the investigation.

4-4.1 Utilize proper procedures for managing victims and fatalities, given a protocol and appropriate personnel, so that all evidence is discovered and preserved and the protocol procedures are followed.

4-4.5 Dispose of evidence, given jurisdictional or agency regulations and file information, so that the disposal is timely, safely conducted, and in compliance with jurisdictional or agency requirements.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.2 Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.

4-7.3 Testify during legal proceedings, given investigative findings, contents of reports, and consultation with legal counsel, so that all pertinent investigative information and

Fire Investigator One

evidence is presented clearly and accurately, and the investigator's demeanor and attire are appropriate to the proceeding.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Utilizes proper procedures for managing fire victims and fatalities so evidence is discovered and preserved (4-4.1)

Demonstrates proper disposal procedures for evidence. (4-4.5)

Expresses investigative findings verbally so that the information is accurate. (4-7.2)

Properly demonstrates the procedures to testify at judicial proceedings so pertinent investigative information is presented clearly and accurately and the investigator's demeanor is appropriate. (4-7.3)

Pass Fail

Pass

☐

Fail

☐

Evaluator: _____ **Date:** _____

Fire Investigator One

4-2 Scene Examination. Duties shall include inspecting and evaluating the scene so as to determine the area or point of origin, source of ignition, material(s) ignited, and as to activity that brought ignition source and materials together and assessing the subsequent progression, extinguishment, and containment of the fire.

4-2.3 Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved; the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

4-2.4 Interpret burn patterns, given standard equipment and tools and some structural or content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

4-2.5 Correlate burn patterns, given standard equipment and tools and some structural or content remains, so that fire development is determined, methods and effects of suppression are evaluated, false origin area patterns are recognized, and all areas of origin are correctly identified.

4-2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined, and evidence is preserved without investigator-inflicted damage or contamination.

4-2.8* Inspect the performance of building systems, including detection, suppression, HVAC, utilities, and building compartmentation, given standard and special equipment and tools, so that a determination can be made as to the need for expert resources, an operating systems impact on fire growth and spread is considered in identifying origin areas, and defeated systems are identified.

4-2.9 Discriminates the effects of explosions from other types of damage, given standard equipment and tools, so that an explosion is identified and its evidence is preserved.

4-7 Presentations. Duties shall include the ability to present findings to those individuals not involved in the actual investigation.

4-7.4 Conduct public informational presentations, given relative data, so that information is accurate, appropriate to the audience, and clearly supports the information needs of the audience.

Fire Investigator One

Name: _____

Date: _____

All of the following elements must be successfully completed to pass this skill sequence.

If the candidate:

Inspects/evaluates the scene to determine the area of origin, source of ignition, materials ignited, and the act that brought the ignition source and materials together. (4-2)

Conducts an interior survey of the scene so areas of potential evidentiary value are identified and preserved. (4-2.3)

Interprets burn patterns so that each individual pattern is evaluated. (4-2.4)

Correlates burn patterns so fire development is determined, false origin area patterns are recognized, and all areas of origin are correctly identified. (4-2.5)

Examines fire debris so that all debris is checked for fire cause evidence, the ignition source(s) is identified, the fire cause is determined and evidence is preserved. (4-2.6)

Properly inspects the performance of building systems so a determination can be made as to the need for expert resources, an operating systems impact of fire growth and spread is considered in identifying origin areas and defeated systems are identified. (4-2.8)

Properly discriminates the effects of an explosion from other types of damage so that an explosion is identified and evidence is preserved. (4-2.9)

Expresses investigative findings verbally so that the information is accurate. (4-7.2)

Pass Fail

Pass ☐

Fail ☐

Evaluator: _____ Date: _____

